

A NEW WEST AFRICAN SPRINGTAIL.

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Among various insects collected on behalf of the Entomological Research Committee by Dr. R. W. Gray in Southern Nigeria, a large number of minute Collembola, all belonging to the same species, and taken at Benin City on June 9th, 1910, have been sent to me for identification. So little is known of Tropical African Collembola, that no surprise could be felt when the insect proved to belong to an undescribed species. Dr. Gray gives no information as to the kind of locality in which this springtail was found, or whether it was in any way injurious. In Europe, however, in recent years, students of economic zoology have come, more and more, to recognise that many species of Collembola feed on living plant tissues¹ as well as on the decaying vegetable and animal refuse which forms the usual food of their order. It seems fitting therefore that an account of the insect should be published in this Bulletin, if only to call the attention of entomologists working in Tropical Africa to the scientific interest, and probable economic importance of springtails.

Order COLLEMBOLA.

Family ENTOMOBRYIDAE.

Sub-family *Isotominae*.

The new species from Benin belongs to the genus *Isotoma* in its older and wider sense. This exceedingly widespread genus (represented in Franz Josef Land and South Victoria Land) includes springtails of typical build without scaly covering, with the third and fourth abdominal segments approximately equal in length, and with simple, ovoid, post-antennal organs on the head. As the fifth and sixth abdominal segments are fused together, and the abdominal sensory bristles simple, this species falls into the sub-genus *Isotomina*, as distinguished by Börner.² In a paper on African Collembola,³ the same writer mentions the absence of records of *Isotomae* from Central and Southern Africa. Wahlgren⁴ has however described *Isotoma lineata* from Cairo, and *I. bituberculata* from Khartum. Neither of these is closely allied to the present species, having the sixth abdominal segment distinct from the fifth.

¹ F. V. Theobald. "Springtails" (Collembola). Their economic importance, with notes on some unrecorded instances of damage." 1er Congrès International d'Entomologie (Bruxelles, 1910), vol. ii, pp. 1-18, pls. i.-iii. Also in "Report on Economic Zoology" for year ending September 30th, 1910, S. E. Agricultural College, Wye.

² C. Börner, "Neue altweltliche Collembolen, nebst Bemerkungen zur Systematik der Isotominen und Entomobryinen," Sitzsb. Gesellsch. Naturforsch. Freunde, Berlin, 1903, pp. 129-182.

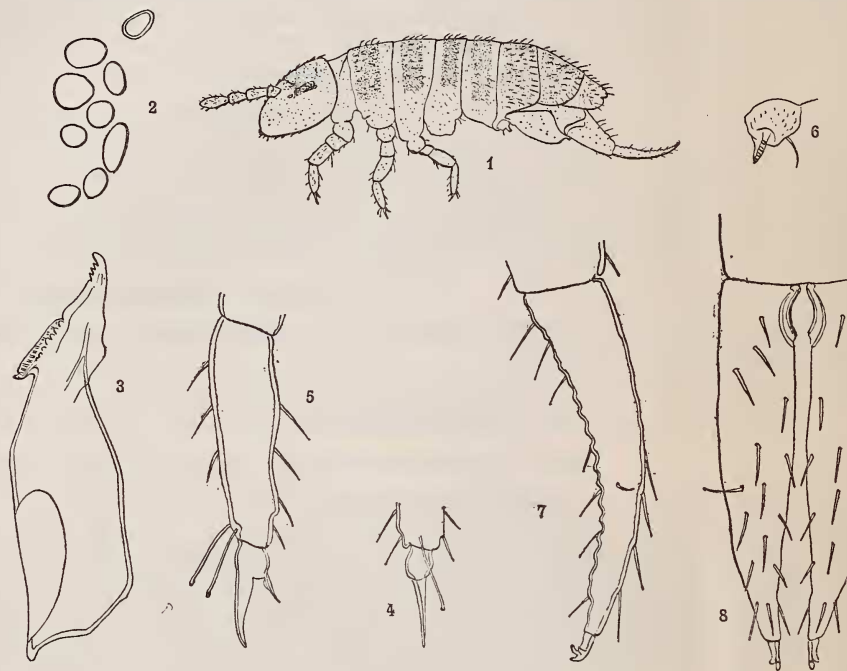
³ C. Börner, "Collembolen aus Ostafrika, Madagascar und Südamerika" (in Voeltzkow's Reise in Ost-Afrika, Bd. ii.), Stuttgart, 1907.

⁴ E. Wahlgren, "Apterygoten aus Aegypten und dem Sudan" (in Results of the Swedish Zoological Expedition to Egypt and the White Nile, 1901), Upsala, 1906.

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***Isotoma (Isotomina) fasciata*, sp. nov.** (figs. 1-8).

Length .7 mm. Feelers as long as head; second and fourth segments sub-equal, third somewhat shorter. Eight ocelli on each side, the inner anterior two larger than the others; post-antennal organ broadly oval, slightly less than a large ocellus in diameter (fig. 2). Front foot with one tenent hair (fig. 4), hind-foot with two (fig. 5). Foot-claw untoothed, slender and slightly curved; empodial appendage short, tapering, with very narrow lamella. Fourth abdominal



Isotoma fasciata, sp. nov.

(1) side-view of insect, $\times 75$; (2) ocelli and post-antennal organ of right side, $\times 470$; (3) mandible, $\times 470$; (4) tip of fore-foot with claw, $\times 470$; (5) tibio-tarsus of hind leg, $\times 470$; (6) catch, $\times 470$; (7) dens and mucro, side-view, $\times 470$; (8) dentes and mucrones, dorsal view, $\times 470$.

segment $1\frac{1}{4}$ times as long as third (fig. 1). Catch with bristle on basal segment (fig. 6). Spring with dens and mucro nearly half as long again as manubrium (fig. 1). Mucro short, with terminal, dorsal, and lateral upturned teeth (figs. 7, 8).

Colour white, with bright blue transverse bands on the thoracic and abdominal segments, and blue markings on the feelers and head.

SOUTHERN NIGERIA: Benin; numerous specimens collected by Dr. R. W. Gray, June 1910.

Types in the British Museum.